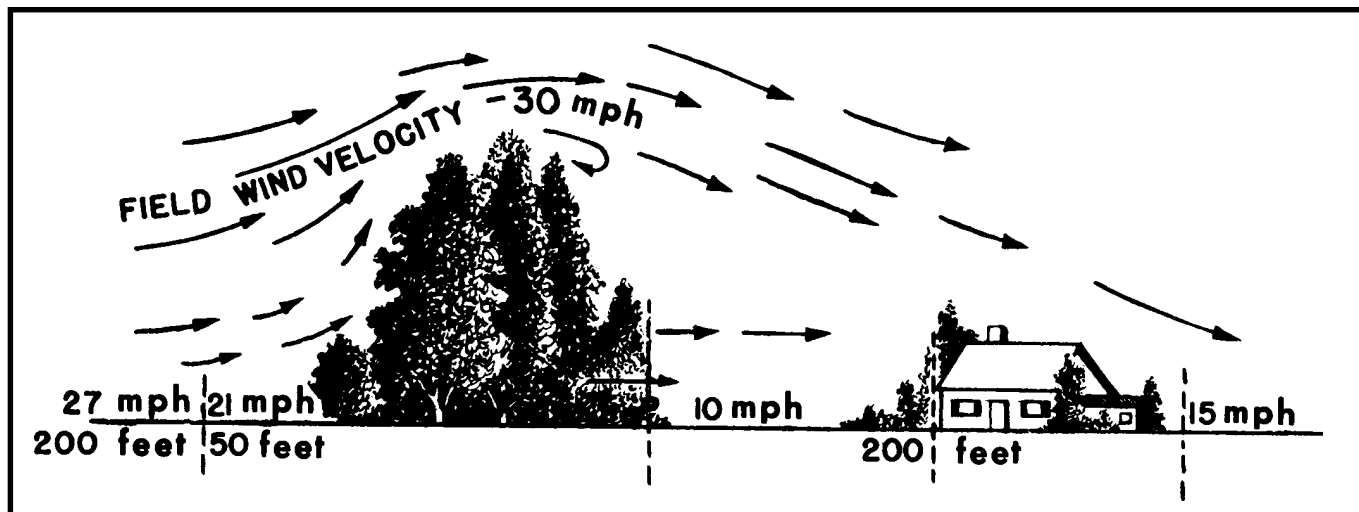


Farmstead Windbreaks



Windbreaks reduce wind currents. Part of the air current is diverted over the top of the trees and part of it filters through the trees.

What are farmstead windbreaks?

Farmstead windbreaks are single and/or multiple rows of trees and/or shrubs designed to reduce and redirect damaging wind currents around the farmstead or headquarters.

What are the benefits

Benefits attributed to farmstead windbreaks range all the way from aesthetics to economics. Farm and ranch windbreaks conserve energy, provide snow control, improve working and recreational environments, enhance wildlife populations, provide visual screening and dust control, and increase the production of various wood and food products. Well designed windbreaks can cut energy costs as much as 20 to 40 percent in the winter and, when combined with additional shade tree plantings, reduce summer cooling costs between 15 and 35 percent.

Aesthetics can be nothing more than a change of scenery - countryside landscaping, which can also involve economics by increasing property values.

Where the practice applies

Farmstead windbreaks apply to wherever achieving the above described benefits are desired. This can be because the area has moderate to high winds, snow, extreme temperature fluctuations, minimal natural forest cover or any of the other concerns such as dust control or noise reduction. The site would also have to be capable of growing the proposed trees and shrubs.

Where to get help

For assistance in planning, designing and establishing farmstead windbreaks contact your local Natural Resources Conservation Service and Conservation District office.

Requirements of farmstead windbreaks

A ranch or farmstead windbreak needs to provide maximum protection to the major buildings and the living and working areas of your farm or ranch.

Ideally, the windbreak should be located within 2-5 times the height (H) of the tallest tree row from the area needing wind protection. An example would be a tree row with the tallest row having a mature height of 50 feet, then the area of protection on the downwind or leeward side would range from 100 to 250 feet. An area of protection also exists on the upwind or windward side from 1-3 times the height. Areas and objects more than 10 times the height from the windbreak will receive little protection.

Windbreaks should be constructed at right angles to the prevailing

wind direction. Protection from the cold winter winds is the major concern in Oklahoma. These winter and early spring winds are predominantly from the north or northwest, therefore windbreaks will generally be designed for the north and west sides of the area needing protection.

The windbreak shall meet the planned objectives within at least a 20 year period.

For windbreak planning, design, and establishment, refer to NRCS Standard and Specifications 380--Farmstead/Shelterbelt Establishment, 612--Tree/Shrub Establishment, 472--Use Exclusion.

Applying the practice

This practice is considered applied when the windbreak is established according to the above recommendations and the objectives have been met.

Other considerations

- ☑ Avoid planting windbreaks where they will interfere with utilities, both above ground and below ground.
- ☑ Sufficient space must be provided to store snow. The required space varies but usually ranges from 100-200 feet. This distance is measured from the farthest windward tree row to the primary area needing protection.
- ☑ A windbreak should be planted no closer than 25 feet from a road in order to prevent the creation of a site hazard.
- ☑ The planting will need to be protected from adverse impacts such as livestock damage and fire.
- ☑ Lanes or access roads that go through a windbreak, should be at an angle to prevailing winds so they will not funnel winds into the farmstead. Because of wind turbulence around the end of a windbreak, the windbreak should extend 100 to 200 feet beyond the area needing protection.
- ☑ Wildlife needs should be considered when selecting tree and shrub species.
- ☑ Use of windbreaks as screens (visual, noise, smell, dust, etc.)
- ☑ Aesthetics - landscaping.
- ☑ Spacing of rows to accommodate width of equipment needed for maintenance.

Maintaining the practice

Livestock must be excluded for the life of the windbreak. Refer to NRCS Standard and Specifications 650--Windbreak Renovation, and 660A--Tree/Shrubs Pruning.

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